/Ona cont./

372 (Vol. I, 380). They choose a straight stick, as thick as one's
4/2 thumb, of Nothofagus betuloides, strip it of leaves, twigs, and cracked
parts of bark, smooth the surface, and split it two-thirds of its
entire length which is hardly more than 65 centimeters. After-
wards the lower, split end is cut off flat. Since the tension of the
wood fibers keeps the two ends spread slightly apart, these five
rungs can be easily manipulated simply with pressure (58).

[17] 58. Hyades (a) 364 and Lothrop (b) 138
have also described this implement briefly.
The similarity in terminology between the
Selk'nam and Tierra del Fuego causes Lothrop to
speak of a "cultural borrowing," which should
not be dismissed.

137 The natives have the advantage, which they truly appreci-
3/3 ate, of sunny growth of trees throughout their homeland, even on
the dreaded Cape Horn. It is lacking only on the low rocks and
smooth stones that /Ona/ are exposed to waves and rooms without
any kind of protection. Wherever shallow crevices or protected
ravines cut into the rocks, frail shrubs and thicker small trees
cling, successfully resisting storms. The Indian finds his needed
3/3 fuel at every landing place, so to speak, although at some places
he obtains it more easily. He prefers dry beechwood for his fire,
for he dreads the damaging smoke of green logs (60). He finds it

60. Persistent watering of the eyes and
slight inflammation of the eyelids are the
consequences of the stinging smoke. See
Hyades (a) 368 and Lothrop (b) 128, as
well as footnote 56.

as driftwood that has been washed ashore by the waves. He also
goes a few steps into the woods and breaks off dry branches with
his hands. If they are higher up, he tosses the noose of his lasso
around them, tugs vigorously, for beechwood is very tough, and
pulls them down. He fells hollow tree trunks with the weight of
his body and then splits them. As soon as a family lands, the
[57] children disperse throughout the neighborhood and gather wood
which they bring to the campsite.

/387 cont./

e38 which they bring to the campsite. The women also take part if more wood is needed. Even the men help, but limit themselves to uprooting heavy trunks or breaking off thick branches and dragging them to the hut. Sometimes they climb a tree, which the women never do. The branches they tear down are carried to the hut by the other members of the family. Everyone works in one way or another for this vital fuel.

392 Now and then they even store wood, chiefly in order to have some dry quickly available. In the simple family hut they pile up as much of it as space permits near the fire or on either side of the entrance. Larger quantities are stored in the so-called winter hut (p. 33), as well as in the enlarged hut for the celebration of the Kina and the Klon. It helps a great deal if the wet wood is kept under cover for some time and touched by the heat of the fire. In the canoe they carry only a small amount, which is all the more carefully handled (p. 43). Whatever has been gathered together by the industry of the family is loosely leaned upright against the outside of the hut. The air outside and the slight flow of warm air from within combine to cause the moisture to drip off and gradually disappear. They never leave the gathered wood behind in the forest because it would not dry there. They would rather arrange it in a bundle and place it in an open spot where the sun and wind can get at it, if they cannot stack it beside the dwelling. Such piles of wood are easily identified as the property of a family, and other people do not touch them.

In the west it is incomparably more difficult to light the fire and keep it going, for the air is saturated with moisture and the ground is a lake. Laboriously they dry a few sticks beside the canoe fire during the trip, and upon landing, these make it possible to start the /388/ fire on the beach. They immediately place other logs near it, which are preheated before the hut for covering the new fire is completed. The latter is now sure to continue burning, and at the same time a bad smoke condition has been prevented. The Yamana know very well that the wood for the hut fire is better after it has remained exposed to the hot fire for an hour or so, or after the wind has swept through it on an open, exposed spot. Hence their uninterrupted efforts to have dry firewood.

501 /440 cont./

and the great efficiency of the bark boat, but have described the details only very superficially. Cooper: 197 simply listed the bibliography of the best descriptions.

[171] We should like to mention briefly that this bark canoe, šnan (or, more completely, ajúlu šnan), is actually very similar in its design and principal parts to the one that the neighboring Halakwulup make (Fig. 25).

a. The Bark Pieces

396 The vessel characteristic of the Yamana since ancient times is a canoe made out of three large pieces of bark. This is the one we shall describe in what follows. Most of our natives have in most recent times turned to the canoe made out of a single trunk [171] and to the flat boat, but this happened only since Europeans brought them the iron ax.

396 The entire region is more or less densely supplied with Ant-
313 arctic beeches, but straight, thick trunks that furnish a smooth, even sheet of bark of sufficient length are found only singly and usually deep in the interior of an island. To discover these is probably the only reason a man is obliged to venture deep into the forest. Usually two or three men join together in the search, if for no other reason than because it is difficult for a single man to loosen the thick bark, ajúlu, from the trunk and because no one goes alone for great distances in the woods (123). This traveling

123. As Hyades (q):350 says: "the chief concern of the Fuegians is to select the best bark; it is often necessary for them to take a long journey to find it" /translated from French/. Despard (b):679 adds: "a man, having associated three others, proceeds into the forest for four or five miles" /cited in English/.

hither and yon is frequently laborious and requires great effort. They almost always decide on Nothofagus betuloides, sér ki, which

/440 cont./

396 313 develops an even, smooth trunk and becomes thicker than the two other species of beech; moreover, its bark does not crack so easily (p. 28 /untranslated/) (124).

124. BD:661 emphasizes: "The bark especially of the hanis [Nothofagus pumilio] is consequently unfit for canoes" /cited in English/. Bridges (k):223 says: "The natives use the bark of the perennial beech [Nothofagus betuloides] for the construction of their canoes, since that of the other species is useless for this purpose" /translated from Spanish/.

When the men come across a trunk that can furnish a suitable piece of bark, they set to work. At least one of them is a capable canoe builder, and he estimates the proportions by eye. They distribute their forces to remove the bark, after they have carefully looked over the faultless piece, free of branches and scar protuberances. The smooth surface must measure at least five meters. The middle part of a long strap of seal skin, ůkęsa, [48] wusůkęsa, is tossed over one of the higher branches, so that the two halves hang down freely for the time being. There is a loop at one end, which one of the younger men puts around his hips and fastens. While his companion pulls the other end, the young man climbs up the trunk bracing himself with his feet and more or less embracing the trunk with his hands. At the top he begins the incision and /441/ draws it perpendicularly to the bottom. Since he is secured with a cord and slowly lowered by the other man, he has both hands free for this work. /Fig. 25 appears here./ Having arrived at the bottom, he must climb up again. Now he draws the horizontal incision all around the trunk. If the trunk is unusually thick and if one section of bark suffices, he must outline this in the required width by a second lengthwise cut. The second horizontal cut a little above the ground is easier to make.

396 313 412 For this work the man uses a bone wedge and a suitable flat stone as a hammer. The former, actually, is used only for the incision in the bark and, very seldom, also to split thicker trunks into firewood. It is made out of a wide rib bone of the whale and

[Text continues on page 113. -Analyst]

/441 cont./

396 313 412 is about 35 centimeters long. There is no actual handle. The piece of bone is filed on a rough stone until the wedge shape appears, with a slightly rounded blade (Fig. 26). The Indians grasp the upper half of this wedge, íla, with the left hand, place it against the bark with light pressure, and, with a stone in the right hand, hammer it in until they hit the fibers of the wood. They handle it like a chisel. If they do not have a wedge of bone, they make the incisions in the bark with a filed mussel shell or with the true shell knife (125), but this takes longer and is far more tiring.

125. Hyades (q):350 is speaking only of this when he maintains that the Fuegians "cut the bark on the tree by means of their mussel shells, sharpened and provided with a handle" /translated from French/.

396 313 After the piece of bark in the shape of a long rectangle has been outlined with the bone wedge, the man again ascends to the upper /442/ horizontal cut. Here he loosens the upper edge with the same or with a finer bone wedge, being careful not to split the bark. The more rounded the bark is, the more it tends to do this.

396 313 412 Some men use a peeler of bone known as /Figs. 26 and 27 appear here/ sẽfsa, according to BD:383 "a bone bark stripper" /cited in English/. Lothrop (b):143 writes sẽnaka. It is about 60 centimeters long, quite flat, seven millimeters thick, and has the shape of a curved paper knife. It is made from a whale rib. It is pushed under the bark, little by little, about 15 centimeters deep, and with light leverage the bark is loosened all the way around, all the more safely since the peeler is slightly springy (Fig. 27) (126).

126. Spencer:131 says in this connection: "The Yahgans make incisions with shells or with stone knives, and prise off the slabs with a long, slightly curved and flat bone tool" /cited in English/. Despard (b):679 probably also refers to this piece which he describes as "a whale's bone made into the fashion of a curved knife" /cited in English/.

[Text continues on page 115.-Analyst]

/442 cont./

396 After the man has separated the bark from the trunk at the top and freed a space, he places first one and then the other foot
313 into it. Now the weight of his body does the work. The more the sheet of bark is loosened, the farther he sinks down until finally he seems to be trapped between bark and trunk. He leans against the trunk and grasps the edges of the piece of bark with both hands, or he presses it away from his body with his hands flat. Stamping with his feet in this pinch, he finally peels it off entirely down to the bottom.

One can well imagine that this work is strenuous and uncomfortable, for the tough bark fibers cling fast and the strap does not give a firm hold. Sometimes the man makes it easier
[481] for himself by tying short wooden pegs, tstĕskasána, one above the other, to the trunk at given intervals. These he uses like steps, but only until he can slip between the loosened bark and the stripped surface of the trunk where he can hold himself.

396 Everyone knows that the best time to strip the bark easily
313 /443/ is during the spring weeks, from the middle of September to the end of October (127), during which time metabolism in
824

127. Lovisato (b):134 extends this period, namely, from October to February, but Bridges (MM:VIII, 156; 1874) only to January.

the bast zone is very active and the turgescence of the tissues is very high. Of course, it does not fail to happen that a family loses its boat at some other time of year and that a man must, of necessity, decide to make a new one. Without delay he must obtain bark pieces, no matter how great the effort. He knows that at any other time but spring the stripped bark is more brittle and splits more easily, hence is less useful.

313 As a precaution in the spring a man occasionally peels off
396 pieces of bark which he does not need at the moment, but which he may later use for some urgent repair (128). This does not

128. "Not being able to build his boat except in the spring, the Fuegian foresightedly

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396

/443 cont./
sometimes makes two of them, but he always puts aside some pieces of bark with which to repair frequent damage" (La Nature: 275) /translated from French/. Lothrop (b):144 adds: "The extra piece was placed under water in a running stream to keep it flexible" /cited in English/.

help him, however, if he loses his vessel at some distant point and if there is no one nearby who will convey him to those pieces of bark. At the least everyone makes a mental note of the trees from which suitable sheets of bark can be removed; then when there is an emergency, he need not waste time looking. Sometimes there is nothing to be done but to wait until the next spring and only then start building anew.

Every piece of bark of the required size is protected from drying up and becoming distorted by being kept under water. It is laid in a pool with a marshy bottom, the buoyancy of which prevents warping. Moderately large stones are placed upon it to keep it from protruding above the surface of the water and expanding unevenly.

B. Its Construction

396 Every Indian knows that the dried sections of the sheet of bark can no longer be made flexible. That is why he generally removes the bark just before he needs it, or he scrupulously keeps it under water until he begins the work. Even when he is working on it and an interruption of several days is forced upon him because of very bad weather or a shortage of food, he at times must place the sheet of bark under water. The sooner he completes his work, the firmer the bark remains.

Three large pieces of bark are necessary (129) for the

129. There are two additional small triangular pieces for the tips on bow and stern. Altogether there are five pieces, never seven as Krickeberg:319 maintains.

/470 cont./

3. The Small Harpoon

225 411 For nourishment the Yámana are almost as dependent on pinnipeds as they are on mussels. Fortunately these animals lie about on the rocks and islands in large herds and cross the individual channels in all directions (p. 38 /untranslated/). The hunter goes after them with his small seal harpoon (Fig. 33). I use this term to distinguish the weapon I wish to describe here from other similar specimens (175).

175. Lothrop (b):152 describes this weapon as consisting of "a heavy shaft and a detachable head joined to the shaft by a thong" /cited in English/.

411 313 [324] The small harpoon is a powerful missile, and for this reason the shaft must be long, heavy, and absolutely straight. For it, almost without exception, the wood of the evergreen beech (Nothofagus betuloides) is chosen, since its trunk usually has a very regular shape and the younger trees have sound wood for a long time. It takes a good eye to find a suitable trunk; it must be flawless if the weapon is to function dependably. It is troublesome to fell the tree. A ring of bark a hand's breadth wide is cut out just above the ground. Then, with a shell knife or a sharpened mussel shell, the layers of wood fibers are scraped off, one after the other, until the incision is deep enough. The running knot of a long strap, wusúkesa, is thrown into the high branches and pulled tight. Then a man swings from it and, aided by his own body weight, tugs until the incised portion breaks through. He immediately cuts off the upper part with the crown in the manner described above, /471/ and he now has a trunk about four meters long lying on the ground. /Fig. 33 appears here./ To cut the suitable piece out of this is a no less protracted and arduous task. The man is aiming for the middle third between the pith and the bast zone. He splits off almost half of it with the bone wedge, tukalapēna (Fig. 26) and with a suitable stone as hammer he has to split the remaining piece lengthwise a second and third time. Finally, by carefully peeling off in splinters the

/471 cont./

411 part that remains, he lifts out the core (Fig. 34). These
313 layers of wood are neither too flexible nor completely stiff, but are slightly springy and absolutely sound.

Through endless scraping with quartz splinters,
411 sharpened mussel shells, or the knife, enough of the
322 long pole is whittled off so that it is about 25 milli-
BH2 meters in diameter and precisely octagonal. Attention is given to this because of a definite esthetic feeling, but also the edges make it possible to grasp the shaft more firmly and safely. The shaft tapers gradually toward the bottom and terminates in a blunt end. On top they carefully cut a notch 12 centimeters deep. For the final polishing of the shaft, it is rubbed with pumice, hiyal, very uniformly and with gentle pressure. To the end the shaft (176) is from 2.80 to 3.10 meters long.

176. Weddell (a):96 has furnished an exact description: "Their spears consist of firm bone, are seven feet long, sharply pointed, and have a barbed hook on one side, four inches from the point which... is fastened to a wooden shaft ten feet long and smooth and straight. A shorter or longer strip of skin is fastened to the bone." Snow (a):II, 15 supplements: "Their spears were about 12 feet long, made of hard wood, octangular, but about half an inch thick and one inch broad, tapering at one end to a point, and the other end to a butt" /cited in English/.

Fig. 33. Small Harpoon.

/471 cont./

411 313 In July, 1923, I asked old Walter to tell me exactly how the shafts for harpoons and spears were made in former times. He invited me to take a walk through the nearby forest at Punta Remolino. My faithful friend and dependable guide, the Selk'nam Indian Toin (Vol. I, 116) also joined us. Walter examined many beech trees with a sharp eye, and it took some time until he finally decided to cut down a suitable one. He used an iron ax, but showed both of us the former procedure which was incomparably more arduous. On our way home he emphasized several times that only the piece he had cut out had the required characteristics, and that the shaft must vibrate well when grasped in the middle. If one chooses other layers of wood, he has to worry about the shaft's bending or warping after repeatedly becoming wet.

411 321 /472/ The other part of this harpoon is the bone point with a single large tooth. For this one selects that portion of a whale rib that has the least curvature. The superfluous ends are taken off with sandstone by a long filing process (177). The piece of bone

177. Nowadays they use iron tools. Despard observed that with regard to the whalebone the Yamana "chop with axe, then cut with knife, then scrape with muscle /sic/ shell, then burnish with smooth stone" (VP:VI, 52; 1859) /cited in English/.

is shaped by pushing it back and forth with light pressure over a flat sandstone. When the curved edge of the back and the upper point are finished, a notch about ten centimeters long is cut into the lower third. This notch must then be finished off with a barb pointing downward. The whole process is nothing more than /Fig. 34 appears here/ endless grinding and filing with narrow pieces of sandstone and pumice. It requires a long time and much patience, for the bone tissue is extremely hard. The lower end, a rectangle about six centimeters long and three centimeters wide, is wedge-shaped. The sides of this tang are purposely left somewhat uneven so that it will fit more securely into the notch. A length of about 22 to 40 centimeters and a width of about 36 millimeters are the measurements most frequently observed for